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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/820,539	Applicant(s) KATZER ET AL.	
	Examiner ISAAC T. TECKLU	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02/26/2008, 11/11/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claim 15 has been cancelled.
2. Claims 1-14 and 16-23 have been examined.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/10/2008 has been entered.

Response to Arguments

4. Applicant's arguments with respect to claims 1-14 and 16-23 have been considered but are moot in view of the new ground(s) of rejection. See Furrer et al. (US 2005/0192962 A1), new art made of record below.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2192

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-14, 16-21 and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Furrer et al. (US 2005/0192962 A1).

Per claim 1 (Currently Amended), Furrer discloses a system for decoupling commercial-off-the-shelf software applications from data stores (e.g. Fig. 2 and related text), the system comprising:

a plurality of commercial-off-the-shelf software applications each compatible with one of a plurality of first data stores (see at least paragraph [0047] “... plurality of applications concurrent transactional access to the legacy data...” and e.g. Fig. 2 and related text), each of the plurality of commercial-off-the-shelf software applications submits a data request compatible with one of the plurality of first data stores (see at least paragraph [0005] “... applications direct access to the data ...”);

a plurality of second data stores (see at least e.g. Fig. 2, 206 and related text – at least one data store);

a plurality of drivers, wherein each of the plurality of first data stores and the plurality of second data stores has a corresponding one of the plurality of drivers configured to receive the data request and pass the data request to the corresponding data store (see at least paragraph [0082] "... connectors 606 function much like software drives..." and e.g. Fig. 6, Fig. 7, VSAM Data 710a, IMS Data 710b and related text);

at least one processor (see at least paragraph [0035] "... various types of processors...");

a listener, recorded on a computer readable medium, when executed by the at least one processor, simulates one of the plurality of drivers corresponding with one of the plurality of first data stores and receive the data request from one the plurality of commercial-off-the-shelf software applications that is compatible with the one of the plurality of first data stores simulated by the listener (paragraph [0083] "... JDBC-ODBC bridge...API combined with a driver...driver written completely in JAVA that passed JDBC request ... middle-tier server...");

a translator, recorded on a computer readable medium, in communication with the listener and the plurality of second data stores (paragraph [0083] "JDBC calls into a database... data request..." and paragraph [0096] "... VSAMSQL allow application to access the VSAM data..."), the translator, when executed by at least one processor, to receive the data request from the listener translate data request, and submits the translated data request for one of the plurality of drivers corresponding with one of the plurality of second data stores for storage by one of the plurality of second data stores (paragraph [0083] "... converts JDBC calls into database or ... data request...translates

the JDBC request into a data store specific data request...”).

Per claim 2 (Currently Amended), Furrer discloses the system of Claim 1, wherein the translator translates the data request into a generic format (paragraph [0083] “... converts JDBC calls into database or ... data request...translates the JDBC request into a data store specific data request...”), and further comprising a data access layer recorded on a computer readable medium in communication with the translator and when executed by the at least one processor to determine where to direct the data request from one of the commercial-off-the- shelf software applications to one of the plurality of second data stores (see at least paragraph [0087] “... distributed connector 620 ensures... requests ... communicated over a network...”), and translates the translated data request from the generic format into a storage format of the one of the plurality of second data stores (see at least paragraph [0097] “... transaction requests... to a transaction converter...”).

Per claim 3 (Currently Amended), Furrer discloses the system of Claim 2, wherein the data access layer maintains an enterprise data model including a data map of where to direct the data request of each of the commercial-off-the-shelf software applications (see at least paragraph [0087] “... distributed connector 620 ensures... requests ... communicated over a network...” and paragraph [0100] “... transaction requests may be temporarily stored...”).

Per claim 4 (Currently Amended), Furrer discloses the system of Claim 3, wherein the data access layer receives the translated data request from the translator and directs the translated

Art Unit: 2192

data request to one of the plurality of second data stores (paragraph [0083] “... converts JDBC calls into database or ... data request...translates the JDBC request into a data store specific data request...”).

Per claim 5 (Currently Amended), Furrer discloses the system of Claim 2, wherein a first commercial-off-the-shelf software application of the plurality of commercial-off-the-shelf software applications to submits a first data request in a first relational database format (e.g. Fig. 6 and related text) and wherein data access layer translates the first data request to a second relational database format (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 6 (Currently Amended), Furrer discloses the system of Claim 5, wherein a second commercial-off-the-shelf software application of the plurality of commercial-off-the-shelf software applications is operable to provide a second output in an older version of a first relational database format (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 7, Furrer discloses the system of Claim 2, wherein a first commercial-off-the-shelf software application of the plurality of commercial-off-the-shelf software applications is operable submits a first data request in an older version of a first relation database format (see at least paragraph [004] “... all updates to the data such that failed transactions...”) and wherein the data access layer translates the first data request to a newer version of Oracle (paragraph [0083]

“... converts JDBC calls into database or ... data request...translates the JDBC request into a data store specific data request...”).

Per claim 8 (Currently Amended), Furrer discloses the system of Claim 1, wherein at least one of the second data stores corresponds with one of the plurality of first data stores (see at least e.g. Fig. 2, 206 and related text – at least one data store).

Per claim 9, Furrer discloses the system of Claim 8, wherein the at least one of the second data stores is further defined as a newer version data store of one of the plurality of first data stores (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 10, Furrer discloses the system of Claim 9, wherein at least one of the second data stores is further defined as a newer version of an relational database of first vendor and wherein one of the plurality of first data stores is further defined as an older version of the relational database of first vendor (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 11, Furrer discloses the system of Claim 9, wherein at least one of the second data stores is further defined as a newer version of a relational database of a second vendor and wherein one of the plurality of first data stores is further defined as an older version of the relational database of the second (see at least paragraph [004] “... all updates to the data such that failed transactions...”)

Per claim 12 (Currently Amended), Furrer discloses the system of Claim 1, wherein the plurality of commercial-off-the-shelf software applications are each operable with only one of a plurality of data stores, each of the plurality of commercial-off-the-shelf software applications submitting data requests compatible with only one of the plurality of data stores (see at least e.g. Fig. 2, 206 and related text – at least one data store).

Per claim 13 (Currently Amended), Furrer discloses a system for maintaining compatibility of commercial-off-the-shelf software applications with data stores, the system comprising:

a commercial-off-the-shelf software application operable with only a first data store, the commercial-off-the-shelf software application submits a data request compatible with only the first data store (see at least paragraph [0047] “... plurality of applications concurrent transactional access to the legacy data...” and e.g. Fig. 2 and related text);

a first driver configured to receive the data request and pass the data request to the first data store (see at least paragraph [0082] “... connectors 606 function much like software drives...” and e.g. Fig. 6 and related text);

at least one processor (see at least paragraph [0035] “... various types of processors...”);

a listener, recorded on a computer readable medium, when executed by the at least one processor, simulates the first driver and receives the data request from the commercial-off-the-

Art Unit: 2192

shelf software application submitted to the first driver (paragraph [0083] "... JDBC-ODBC bridge...API combined with a driver...");

a translator, recorded on a computer readable medium, in communication with the listener when executed by the at least one processor to receive the data request from the listener and translates the data request into a generic format to produce a first translated data request (paragraph [0083] "... converts JDBC calls into database or ... data request...translates the JDBC request into a data store specific data request...").

a data access layer, recorded on a computer readable medium, in communication with the translator and executed by at least one processor to determine, based on an enterprise data model, to direct the data request of the commercial-off-the-shelf software applications to a second data store and translates the first translated data request from the generic format into a storage format of the second data store to produce a second translated data request (paragraph [0083] "... JDBC-ODBC bridge...API combined with a driver...driver written completely in JAVA that passed JDBC request ... middle-tier server...");

a wrapper recorded on a computer readable medium, when executed by at least one processor, receives the second translated data request from the data access layer and wraps the translated data request based on storage format of the second data store (see at least paragraph [0097] "... transaction requests... to a transaction converter...")

a second driver configured to receive the wrapped second translated data request and pass the wrapped second translated data request to the second data store (e.g. Fig. 6, 606 and related text); and

Art Unit: 2192

the second data store receives the wrapped second translated data request from the second driver and performs an action specified in the data request (see at least e.g. Fig. 2, 206a and related text – at least one data store);

a second data store based on the storage format and configured to receive and store the wrapped and translated output (see at least e.g. Fig. 2, 206b, Fig. 7, 710 and related text – at least one data store)

Per claim 14, Furrer discloses the system of Claim 13, wherein the second data store is a newer version data store of the first data store and a different vendor database than the first data store (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 16 (Currently Amended), Furrer discloses a system for integration of commercial-off-the-shelf software applications and databases, the system comprising:

a commercial-off-the-shelf software application operable with a first data store, the commercial-off-the-shelf software application submits a data request compatible with the first data store (see at least paragraph [0047] “... plurality of applications concurrent transactional access to the legacy data...” and e.g. Fig. 2 and related text);

a first driver configured to receive the data request and pass the data request to the first data store (see at least paragraph [0082] “... connectors 606 function much like software drives...” and e.g. Fig. 6 and related text);

at least one processor (see at least paragraph [0035] "... various types of processors...");

a listener, recorded on a computer readable medium, when executed by at least one processor, to simulates the first driver and receives the data request from the commercial-off-the-shelf software application submitted to the first driver (paragraph [0083] "... JDBC-ODBC bridge...API combined with a driver...");

a translator, recorded on a computer readable medium, in communication with the listener and the plurality of second data stores, the translator, when executed by at least one processor, receive the data request from the listener and translates the data request (paragraph [0083] "... JDBC-ODBC bridge...API combined with a driver...driver written completely in JAVA that passed JDBC request ... middle-tier server...");

a second driver configured to receive the translated data request and pass the translated data request to a second data store; wherein the second data store receives the translated data request from the second driver and performs an action specified in the data request (see at least paragraph [0087] "... distributed connector 620 ensures... requests ... communicated over a network...");

a service broker, recorded on a computer readable medium, when executed by at least one processor, operable maintain a record of data requests from the commercial-off-the-shelf software application and stored in the second data store, the service broker further configured to roll-back failed data requests (see at least e.g. Fig. 2, 206b and related text – at least one data store);

Per claim 17 (Currently Amended), Furrer discloses the system of Claim 16, wherein the translates the data request into a generic format, and further comprising a data access layer recorded on a computer readable medium in communication with the translator and when executed by the at least one processor, determines, based on an enterprise data model, where to direct the data request from one of the commercial-off-the-shelf software applications to the second data store, and translates the translated data request from the generic format into a storage format of the second data store (see at least paragraph [0087] “... distributed connector 620 ensures... requests ... communicated over a network...”);

Per claim 18 (Currently Amended), Furrer discloses the system of Claim 16, wherein the commercial-off-the-shelf software application is operable with only the first data store, and wherein the commercial-off-the-shelf software application submits the data request compatible with only the first data store (e.g. Fig. 5, Mapper 512 and related text).

Per claim 19 (Currently Amended), Furrer discloses the system of Claim 16, wherein the service broker further comprises:

a transaction data store configured that maintains a record of the data request by the commercial-off-the-shelf software application (see at least paragraph [0075] “... VSAM data record...”));

an exception handler that identifies a failed transaction and communicate with the transaction data store to restore the second data store to a state prior to the failed transaction (e.g.

Fig. 5, Mapper 512 and related text).

Per claim 20 (Currently Amended), Furrer discloses the system of Claim 19, further comprising a data warehouse recorded on a computer readable medium and wherein the data warehouse when executed by the at least one processor, is asynchronously updated with the data request from the commercial-off-the-shelf software application (see at least paragraph [004] “... all updates to the data such that failed transactions...”).

Per claim 21, Furrer discloses the system of Claim 19, wherein a compensating transaction is used to restore the failed transaction (see at least paragraph [0015] “... rollback, back up and recovery...”)

Per claim 23 (Currently Amended), Furrer discloses the system of Claim 19, further comprising:

a data warehouse, recorded on the computer readable medium, when executed by at least one processor, maintains data (see at least paragraph [0042] “... maintaining the structure of records or data elements...”);

a query processor, recorded on the computer readable medium, when executed by at least one processor manages transaction processing of data requests from the commercial-off-the-shelf software application (see at least e.g. Fig. 1, 106 and related text); and

a metadata repository, recorded on the computer readable medium, when executed by at least one processor maintains a logical data model related to the data, the metadata

Art Unit: 2192

repository instructs the query processor regarding handling of the data requests from the commercial-off-the-shelf software application and between the second data store and the data warehouse (see at least e.g. Fig. 9, 908-914 and related text).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furrer et al. (US 2005/0192962 A1) in view of Gajda (US 6,502,088 B1).

Per claim 22, Furrer substantially discloses the above invention as recited. However, Furrer does not explicitly disclose wherein an XA transaction is used in combination with the compensating transaction to restore the failed transaction. Nevertheless, as evidenced by the teachings of Gajda, XA transaction is used in combination with the compensating transaction to restore the failed transaction (see at least col.5:20-65 and e.g. FIG. 5 – two phase commit, transaction manager -). Therefore it would have been obvious to one skilled in the art at the time the invention was made to use XA transaction with the compensating transaction to restore and

Art Unit: 2192

to facilitate interaction between different applications in different database as suggested by Gajda (col.5:20-65).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ISAAC T. TECKLU whose telephone number is (571) 272-7957. The examiner can normally be reached on M-TH 9:300A - 8:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Isaac T Tecklu/
Examiner, Art Unit 2192

/Tuan Q. Dam/
Supervisory Patent Examiner, Art Unit 2192

Application/Control Number: 10/820,539
Art Unit: 2192

Page 16